Bruhath Bangalore Mahanagara Palike

Office of the Executive Engineer
Electrical Division, RR Nagara Zone
Bruhath Bengaluru Mahanagara Palike

Schedule-B (BOQ)

Issued to

Executive Engineer-3
Karnataka Rural infrastructure Decelopment Ltd
Bangalore

Name of the Work:- Providing Street Light in BBMP wards of Rajarajeshwarinagar Assembly Constituency (Ward No. 16,17,37,38,42,69,73,129 &160)

Sl. No.	Approved Qty	Description	Unit	Approved Rates		Amount
				in Figures	In Words	
		Part A: LED Fittings and Timer Switches				
1	146	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II. 4.35.1) LED Streetlight 24watts	Each	6912.00	Rupees Six Thousand Nine Hundred and Twelve Only	1009152.00
2	237	LED Street light. Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs. 50000 hr. @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4 KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI 75+. housing with supplier word mark / name shall be engraved / Embossing on the die cast housing / body part. . Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacturer. Suitable for A1/A2 Roads as per IS 1944 Part I & Part II. a) 90 Watts	Each	31250.00	Rupees Thirty One Thousand Two Hundred and Fifty Only	7406250.00

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3	12	LED Flood Light. Supplying of LED Floodlight with .....W System Power consumption pressure die cast aluminum housing with powder coating with IP 65 protection. 1, 200-275V voltage with electronic Driver, PF>0.9, should meet ANSI 2G Vibration test, Compliance to UL/CE with Class I. System rating shall be 50K hrs. @ Lumen maintenance of 70%, system efficacy > 80lm/w. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. LED Floodlight 110W	Each	17593.00	Rupees Seventeen Thousand Five Hundred and Ninety Three Only	211116.00
4	237	Releasing and Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.(1.9 times the Basic Rate for Fixing)	Each	334.4	Rupees Three Hundred and Thirty Four Only Paise Forty Only	79252.80
5	237	Supplying and Fixing of.....mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires. 17.1.2)Using 32mm dia G.I.pipe	Each	893.00	Rupees Eight Hundred and Ninety Three Only	211641.00
6	80	Supply and Installation/Fixing/ Provision of Outdoor type Thermoplastic modular panel enclosure with transparent polycarbonate lid, shock proof, IP 65 (Weather Proof) rust proof, water proof, corrosion proof having internally embedded gasket on both lid and flap suitable to fix. Single phase/three phase energy meter in suitable base plate and having a provision for Fuse/MCB cutout with suitable transparent hinged flap opening for operating MCB along with complete tamper proof SEALING faciiity 300mmx450mmx214mm	Each	5826.00	Rupees Five Thousand Eight Hundred and Twenty Six Only	466080.00
7	80	Supply of solar lux level street light controller -single phase 3KW	Each	7984.00	Rupees Seven Thousand Nine Hundred and Eighty Four Only	638720.00
8	80	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947. 6.12.4)100-125Amps	each	9915.00	Rupees Nine Thousand Nine Hundred and Fifteen Only	793200.00
9	80	Supplying and fixing angle iron frame work fabricated out of M.S angle iron... and M.S. flat... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint.	mtr	263.00	Rupees Two Hundred and Sixty Three Only	21040.00
10	80	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.100Amps	each	360.00	Rupees Three Hundred and Sixty Only	28800.00
11	160	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and Complete wiring as required. 40-63 Amps SP	each	677.00	Rupees Six Hundred and Seventy Seven Only	108320.00
12	320	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes 25 sqmm long barrel	Each	20.59	Rupees Twenty Only Paise Fifty Eight Only	6588.80
13	800	Supplying of 1.1 KV LT UG cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanized, steel strip confirming to IS-3975:1990 (No of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1998 & confirming GTP of GROUP-A.7.4.5) 3.5 core 25 sqmm	mtr	165.60	Rupees One Hundred and Sixty Five Only Paise sixty Only	132480.00
14	800	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe/ stoneware pipe/ on wall/ on pole as required .II. On wall /Structure 7.8.7) 25 sqmm to 75 sqmm	mtr	34.80	Rupees Thirty Four Only Paise Eighty Only	27840.00
15	150	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 7.9.2)-In soil (hard)	Mtr	106.00	Rupees One Hundred and Six Only	15900.00
16	8	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DMC insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete.6.38.1)100Amps 4x30x6mm Aluminum Strips	mtr	2135.00	Rupees Two Thousand One Hundred and Thirty Five Only	17080.00

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		PART B:-Lightings to Goraguntepalya Road From Tumkur Road to Kuvempu statue				
1	26	Fabricating, supplying and erecting swaged tubular pole of height ...Mtr having three sections, and providing two coats of red oxide paint and finished with two coats of enameled paint of approved quality and colour and M.S. base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x125x82mm for 7.5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1:2:4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0.6M above ground level as per IS 2713 - 7. Erection of light duty pole on Footpath a) 7.5 Mt (4.5Mt Hb,114.3mm dia 4.5mm thick x1.5M Hm, 88.9 mm dia 4.50mm thick x 1.5 M Ht,76.1 mm dia 3.25mm thick) as per IS 410 SP 5 (Base Plate of size 300X300X6mm) KPWD Electrical SR 2007-08	Each	9000.00	Rupees Nine Thousand Only	234000.00
2	26	Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. 17.4.1)Single bracket 1.5 Mtr. Length	Each	1292.00	Rupees One Thousand Two Hundred and Ninety Two Only	33592.00
3	750	Supplying of 1.1 KV LT UG cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanized, steel strip confirming to IS-3975:1990 (No of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1998 & confirming GTP of GROUP-A.7.4.5) 3.5 core 25 sqmm	mtr	165.60	Rupees One Hundred and Sixty Five Only Paise Fifty Nine Only	124200.00
4	750	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe/ stoneware pipe/ on wall/ on pole as required In existing trench/duct.7.8. 7.8.2) 25 sqmm to 75 sqmm	mtr	16.20	Rupees Sixteen Only Paise Nineteen Only	12150.00
5	625	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 7.9.2)-In soil (hard)	Mtr	106.00	Rupees One Hundred and Six Only	66250.00
6	650	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 7.20.1)-40mm OD / 32mm ID	Mtr	98.00	Rupees Ninety Eight Only	63700.00
7	520	Wiring for lighting/power circuit using one of FRLS PVC insulated 11oov grade, multistrand copper with low conductor resistence single core wire in open or consealed system of wiring wit specified IS-694:1990 & confirming to GTP of group A..2.5.3) 2.5 sqmm	Per Mtr.	29.20	Rupees Twenty Nine Only Paise twenty Only	15184.00
	50	2.5.5) 6sqmm	Per Mtr.	63.80	Rupees Sixty Three Only Paise Eighty Only	3190.00
8	11.232	KSRB 2-2.2 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(b) / 2.3.5 (Item No. - 2.4, Page No. 5)	Cum	283.02	Rupees Two Hundred and Eighty Three Only Paise two Only	3178.88

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9	11.232	KSRB 4-1.5 : Providing and laying in position plain cement concrete of mix M20 with OPC cement @ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.43cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 (Item No. - 4.5, Page No. 12.)	Cum	5880.88	Rupees Five Thousand Eight Hundred and Eighty Only Paise Eighty Eight Only	66054.04
10	74.88	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2 (Item No. - 4.28, Page No. 15)	Sqm	239.56	Rupees Two Hundred and Thirty Nine Only Paise Fifty Six Only	17938.25
11	0.65	KSRB 4.9.1 : Providing mild steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 (Item No. - 4.45, Page No. 17)	q	6368.48	Rupees Six Thousand Three Hundred and Sixty Eight Only Paise Forty Eight Only	4139.51
		PART-C, JP PARK Aand Yeshwanthpura ward Parks light Poles & other woks				
1	115	Fabricating, supplying and errection of swaged tubular pole of height 3.5Mtr having three sections and providing two coats of red oxide paint and finished with two coats of enameled paint of approved quality and colour and M.S. Base plate of suitable size 200mmX200mmX6mm thick welded at the bottom of the pole (as per IS) and 40 mm dia GI/flexible PVC pipe of 1 Mtr. Length fitted to the 18 gauge M.S control box of size167mmX125mmX82mm arrangements 30amps porcelain fuse cut out/DP switch.1no of 4way connector in case of cable looping. The pole shall be erected n cement concrete work(1:2:4) including excavation and refilling.a)3.5Mtr Pole. (top- 0.5mtr,2" inner dia bottom-1.5mtr,3" dia,Middle-1.5 mtr) Planting depth 0.75 Mtr.	each	3200.00	Rupees Three Thousand Two Hundred Only	368000.00
2	52	LED Flood Light. Supplying of LED Floodlight with .....W System Power consumption pressure die cast aluminum housing with powder coating with IP 65 protection. 1, 200-275V voltage with electronic Driver, PF>0.9, should meet ANSI 2G Vibration test, Compliance to UL/CE with Class I. System rating shall be 50K hrs. @ Lumen maintenance of 70%, system efficacy > 80lm/w. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. LED Floodlight 60W	Each	7129.00	Rupees Seven Thousand One Hundred and Twenty Nine Only	370708.00
3	35	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.a) 50mm dia	P/mtr	391.00	Rupees Three Hundred and Ninety One Only	13685.00
4	15	Supplying and fixing of HPMH lamps on existing fitting mounted on tubular pole Single end a)70 to150Watts	Each	912.00	Rupees Nine Hundred and Twelve Only	13680.00

Executive Engineer-3
KRIDL, BBMP, Bangalore

Executive Engineer (Elec)
Rajarajeshwari Nagar Zone
Bruhat Bangalore Mahanagara Pal

5	15	Supply and fixing of ...Watts heavy duty open construction ferromagnetic copper ballast for HPSV/HPMH lamps.	Each	1784.00	Rupees One Thousand Seven Hundred and Eighty Four Only	26760.00
6	41	Supply, installation, testing and commissioning of compact ceiling speaker with power handling up to 40 Watt RMS 0/100volt@ 1456 ohms single channel. selectable taping Specs: Power handling	Each	1360.00	Rupees One Thousand Three Hundred and Sixty Only	55760
7	3	Supply, installation, testing and commissioning of Mixing amplifier with 4 - 6 mic/ 2 aux in with PA/REC out Single/Dual Channel power handling of 60 to 120 watt RMS 4 ohms and 100/70 volt output on bridge mode single channel Rack mountable.	Each	22160.00	Rupees Twenty Two Thousand One Hundred and Sixty Only	66480
8	540	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade copper with flexible copper conductor confirming to table 3 class 5 of IS:8130-1984 and PVC insulation and sheathed suitable for working voltage upto 1100Volts as per IS-694:1990 & confirming to GTP of GROUP-B. a)4C X 1.5Sq.mm	P/mtr	58.6	Rupees Fifty Eight Only Paise Sixty Only	31644
9	30	Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. Single bracket 1.5 Mtr. Length	Each	1292.00	Rupees One Thousand Two Hundred and Ninety Two Only	38760
	90	17.4.3) Double bracket 2x1.5 Mtr. Length	Each	2158.00	Rupees Two Thousand One Hundred and Fifty Eight Only	194220
10	115	Supplying and fixing of Spiral Earth Electrodes as per standard technical specification as per BESCOM.	Each	544.00	Rupees Five Hundred and Forty Four Only	62560.00
11	172.5	Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit system of wiring) using necessary suitable size clamps, nails, guttas/spacers etc. GI Wire 10 SWG	P/mtr	69.30	Rupees Sixty Nine Only Paise thirty Only	11954.25
12	25.88	KSRB 2-2.2 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(b) / 2.3.5 (Item No. - 2.4, Page No. 5) 115*0.9*0.5*0.5	Cum	283.02	Rupees Two Hundred and Eighty Three Only Paise two Only	7323.14
13	9.315	KSRB 4-1.5 : Providing and laying in position plain cement concrete of mix M20 with OPC cement @ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.43cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 (Item No. - 4.5, Page No. 12) 115*0.9*0.3*0.3	Cum	5880.88	Rupees Five Thousand Eight Hundred and Eighty Only Paise Eighty Eight Only	54780.40
14	1.15	KSRB 4.9.1 : Providing mild steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 (Item No. - 4.45, Page No. 17) 115*10/1000	q	6368.48	Rupees Six Thousand Three Hundred and Sixty Eight Only Paise Forty eight Only	7323.75

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